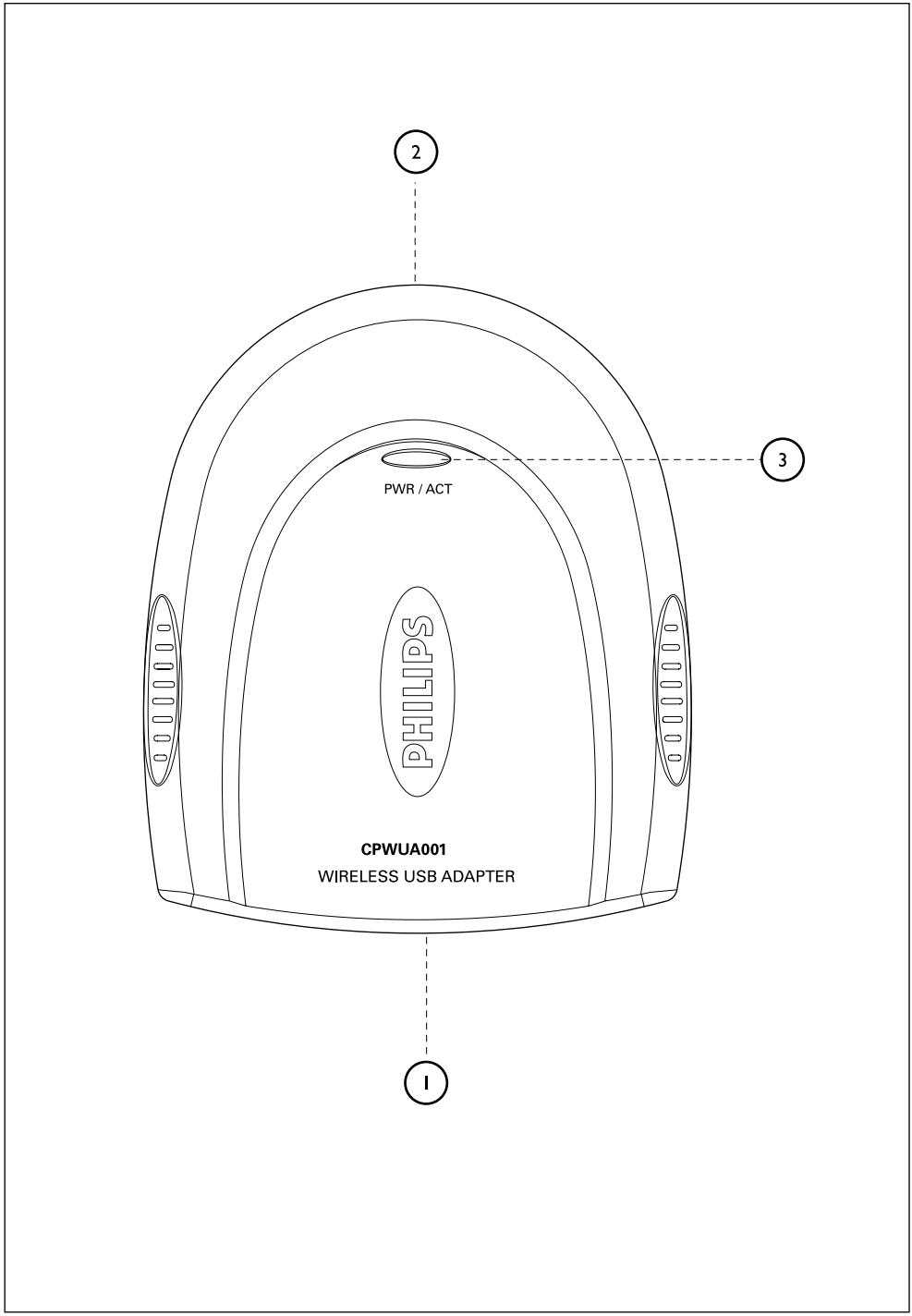
Wireless USB Adapter

CPWUA001

Instructions for use

PHILIPS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PWR / ACT
PHILIPS
CPWUA001
WIRELESS USB ADAPTER
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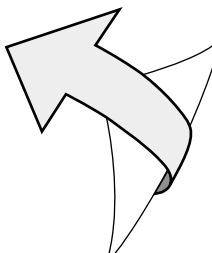


Table of Contents

Wireless USB Adapter

CPWUA001

Thank you for purchasing the Philips Wireless USB Adapter. This Wireless USB Adapter is a WiFi (IEEE 802.11b) compatible USB device. It fully supports high data rates up to 11 Mbps with automatic fallback to 5.5 Mbps, 2 Mbps and 1 Mbps for secure operation at lower data rates in even the most difficult of wireless environments.

The Direct Sequence Spread Spectrum technology enhances immunity to radio interference. In addition, the adapter is easy to install on all devices with an USB interface. It keeps your PC's power consumption to a minimum with deep sleep mode, and it has advanced encryption features for enterprise level network security.

Technology for people...

Legend of product illustration on inside flap

1 Connector to PC
For connecting the Wireless USB Adapter to the USB port of your PC.

2 Integrated antenna
Built-in antenna for establishing wireless connections.

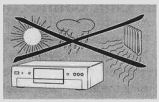
3 Indicator LED
Displays the network status.

LED	LED colour	Meaning
PWR/ ACT	Blue	• Off when not connected or with PC switched off. • On when receiving power and ready for operation. • Blinking when transmitting data (network activity).

Important information

- Please install and connect the product in the order as described in the chapter "Installing the Wireless USB Adapter" only. This assures best installation results with the least technical hassles.
- Please read this guide carefully before using the Wireless USB Adapter; and keep it for future reference.
- The most recent downloads and information on this product will be available through our web site www.philips.com
- During set-up and installation, it may be helpful to have the instructions for your PC and other network components at hand.

Safety Precautions



- Do not expose the system to excessive moisture, rain, sand or heat sources.
- The product should not be exposed to dripping or splashing. No object filled with liquids, such as vases, should be placed on the product.
- Keep the product away from domestic heating equipment and direct sunlight.
- Allow a sufficient amount of free space all around the product for adequate ventilation.
- Do not open this product. Contact your Philips retailer if you experience technical difficulties.

Environmental information

All redundant packing material has been omitted. We have done our utmost to make the packaging easily separable into three mono materials: cardboard (box), polystyrene foam (buffer) and polyethylene (bags, protective foam sheet). Your set consists of materials that can be recycled if disassembled by a specialised company. Please observe the local regulations regarding the disposal of packing materials, exhausted batteries and old equipment.

Packaging contents

Please check whether all of the following items are present in the box of the Wireless USB Adapter. These are provided to help you set up and use your Wireless USB Adapter. Contact your Philips retailer if any items are missing.

- Wireless USB Adapter
- Installation CD
- Instructions for Use-booklet
- USB Cable

Disclaimer

This product is provided by "Philips" "as is" and without any express or implied warranty of any kind of warranties, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose are disclaimed.

In no event shall Philips be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of information, data, or profits; or business interruption) howsoever caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of inability to use this product, even if advised of the possibility of such damages.

Philips further does not warrant the accuracy or completeness of the information, text, graphics, links or other items transmitted by this product.

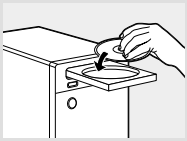
Installing the Wireless USB Adapter

Always install the Wireless USB Adapter drivers from the Installation CD before you connect the adapter to your PC. (See below)

Installing the Wireless USB Adapter software

Warning:

Do not connect the Wireless USB Adapter to your PC until the Setup Wizard asks you to do so.



1 Place the CD included in the box in your computer's drive and start installing the software.

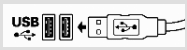
> The CD should start automatically. If it does not, please double-click "My Computer", then the drive icon, and finally "Setup.exe" to start the CD.

2 Follow the on-screen instructions for setting up your Wireless USB Adapter.

3 In the installation program, choose your product from the list and click 'Next' to continue the installation procedure.

> The following elements will be installed:
- Wireless USB Adapter drivers and tools
- Wireless Base Station Client tool (optional)
- Manual in PDF format
- Readme document and release notes

You only need to install the Wireless Base Station Client Tool if you want to use the Wireless USB Adapter for configuring a Philips Wireless Base Station. You do not need it if you just want to install or connect to a wireless network.



Do not connect the Wireless USB Adapter to your PC until the Setup Wizard asks you to do so.

IMPORTANT: Only connect the Wireless USB Adapter to a powered USB port that can provide the adapter with enough electrical power. (see Technical Specifications)

4 This concludes the installation procedure. Please see the following sections on connecting, configuring and using the Wireless USB Adapter.

Should there appear any error messages or requests for additional information on the screen, then please read the entire manual and the "Troubleshooting" section. With the information given in this manual, you should be able to solve any problems with installing and using the Wireless USB Adapter cable. Please visit our web site www.philips.com if you need further assistance.

Using and configuring the Wireless USB Adapter

The user interface for the Wireless USB Adapter consists of an application that loads during start-up of the PC, and that stays active in the system tray.

The system tray icon reflects the status of the wireless connection for the adapter.

System tray icon

1 The icon represents signal strength and wireless link status. In addition, it gives you access to the Philips Wireless Network Utility and its configuration menus.
If there is no wireless network connection, the icon looks like this and the tool tip indicates that there is no wireless connection.

2 Right-clicking the system tray icon displays the following options:

- **Profiles (top part of this menu)**
  For choosing one of your profiles. The green indicator points to the active profile. Please open the Philips Wireless Network Utility if you want to add or delete a profile.

- **Philips Wireless Network Utility**
  Opens the Philips utility program for viewing and changing your wireless network adapter settings.

- **Hide**
  Hides the system tray icon from the system tray until you restart your computer, without disabling the wireless network adapter.

- **Exit**
  Disables the wireless network adapter and removes the system tray icon from the system tray until you restart your computer.

Philips Wireless Network Utility

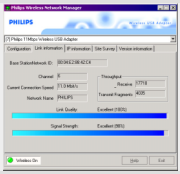
This wireless network utility program has five tabs with information and settings.

- **Configuration**
  The Configuration tab lets you manage your profiles, and gives you access to your wireless network and encryption settings.

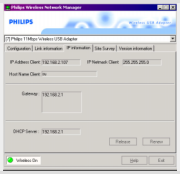
  Adding a new profile will start a Profile Wizard that leads you through setting the properties for a wireless connection.

See the text on **"*Wireless communication settings*"** in this manual for information on wireless network setting like SSID and Operating Mode.

The Radio On/Off button appears on every tab to give you control over enabling and disabling the wireless link.

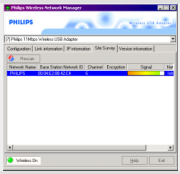


- **Link information**
  The Link information tab displays information on the wireless network name (SSID) to which there is a wireless connection, the signal strength and link quality, the connection speed, the channel and the number of sent/received (Tx/Rx) fragments.



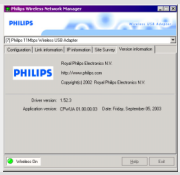
- **IP information**
  The IP information tab displays information on the Host Name, IP Address, Subnet Mask, and Gateway.

  This window also contains buttons for releasing and renewing the IP connection.



- **Site Survey**
  Selecting the Site Survey tab displays a list of available wireless network access points. It list shows you the following information:
  - The name of the wireless connection (SSID)
  - Signal strength and wireless link quality
  - An icon reflecting if encryption is enabled

  You may double-click a network name to open the Profile Wizard.



- **Version information**
  Selecting this tab displays vendor and version information.

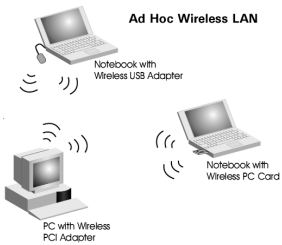
Network configuration and planning

The Philips Wireless USB Adapter supports a stand-alone wireless network configuration, as well as an integrated configuration with 10/100 Mbps Ethernet LANs.

Network design

The Wireless USB Adapter can be configured for :

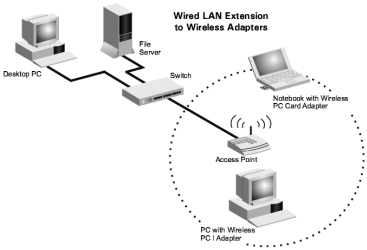
- **Ad Hoc (Peer-to-Peer)** - for small groups of computers that only communicate with each other
- **Infrastructure (Access Point)** - for wireless networks with a central Wireless Access Point or Wireless Base Station



Ad Hoc wireless network

An ad hoc wireless network consists of a group of computers, each equipped with one wireless adapter, connected via radio signals as an independent wireless network.

Computers in a specific ad hoc wireless LAN must therefore be configured to the same radio channel. An ad hoc wireless network can be used at home or temporary environment.



Infrastructure wireless network

A Philips Wireless Base Station (or access point) can provide computers on a wireless network with access to a wired computer network and to the Internet.

An integrated wired and wireless network is called an infrastructure configuration. This infrastructure consists of a group of wireless PC users, and a wireless access point or base station that is directly connected to the wired network. Each wireless PC in this network can talk to any computer in its wireless group via a radio link, or access other computers or network resources in the wired network infrastructure via the wireless access point or base station.

The infrastructure configuration not only extends the accessibility of wireless PCs to the wired network, but also extends the effective wireless transmission range for wireless PCs by passing their signal through one or more access points. A wireless infrastructure can be used for access to an existing computer network, or for connection to the Internet.

Wireless communication settings

To make network communication possible, you need to adjust two sets of settings:
– the wireless adapter settings; and
– your network settings.

Wireless adapter settings

In the system tray, right-click the wireless adapter icon  , and select the Profiles menu item for editing your settings or adding a new connection profile. All computers and wireless network devices in the same network should have the same SSID and the same encryption key for wireless security. In Ad Hoc mode, you must also specify the same radio channel for all wireless devices.

Operating Mode – Set the operation mode to ***Ad Hoc (Peer-to-Peer)*** for network configurations that do not have a Wireless Base Station or Access Point, or to ***Infrastructure (Access Point)*** for configurations with an access point. (Infrastructure is the default setting.)

SSID – Input an SSID (wireless network name) for the wireless network to which you want to connect. Alternatively, use the Site Survey menu item to choose from the list of available SSIDs. (Default SSID: Philips.)

Channel – If you are setting up an Ad Hoc wireless network, set the channel number to the same radio channel as that used by the other wireless devices in your group. However, if you are connecting to a network via a base station or an access point, then the channel is automatically set to the channel of the access point to which the adapter connects.
The Channel can only be set when the Operating Mode is set to Ad Hoc (Peer-to-Peer).

Encryption key – *Wired Equivalent Privacy (WEP)* and **WiFi *Protected Access (WPA)*** are implemented in the adapter to prevent unauthorised access to your wireless network.

For more secure data transmissions, set encryption to the highest number of bits. E.g. a 128-bit setting gives you a higher level of security than 64-bit.
IMPORTANT: The setting must be the same for all clients in your wireless network. (Default: Disabled.)

WEP key conversion table

ASCII	HEX
0	30
1	31
2	32
3	33
4	34
5	35
6	36
7	37
8	38
9	39
A	41
B	42
C	43
D	44
E	45
F	46
G	47
H	48
I	49
J	4A
K	4B
L	4C
M	4D
N	4E
O	4F
P	50
Q	51
R	52
S	53
T	54
U	55
V	56
W	57
X	58
Y	59
Z	5A
a	61
b	62
c	63
d	64
e	65
f	66
g	67
h	68
i	69
j	6A
k	6B
l	6C
m	6D
n	6E
o	6F
p	70
q	71
r	72
s	73
t	74
u	75
v	76
w	77
x	78
y	79
z	7A

The ***WEP (Wired Equivalent Privacy)*** implemented in this Wireless USB Adapter is based on the RC4 encryption algorithm. Please, select ***Hex*** or ***ASCII*** for your Key Type.

– If the Key Type is set to ***Hex***, the security keys are four 10 digit keys for the 64-bit WEP setting and four 26-digit keys for the 128-bit WEP setting. (The hexadecimal digits can be 0~9 & A~F, e.g. D7 0A 9C 7F E5.)
– If the Key Type is set to ***ASCII***, the security keys are four 5-digit keys for the 64-bit WEP setting and four 13-digit keys for the 128-bit WEP setting.
– Consult the ASCII/HEX conversion table if you need to translate a (case sensitive) ASCII key into HEX notation. Example: ***MNode*** (ASCII) ***= 4D 4E 6F 64 65*** (HEX).

Default Key – Choose the Key ID that has the encryption string you prefer. If you are using a key generated from the passphrase, you must use the same passphrase and key on each wireless device.

Passphrase – If Passphrase is checked, security keys for WEP encryption are generated from your passphrase string. If encryption is set to 128 bit, only Key 1 is generated. If encryption is set to 64 bit, Keys 1-4 are generated. You must use the same passphrase on all the other stations in your network. Note: A passphrase string can consist of up to 32 alphanumeric characters. After entering the passphrase, click Apply.

The ***WPA (WiFi Protected Access***) implemented in this Wireless USB Adapter uses an alphanumeric password between 8 and 63 characters long. This password may include symbols and spaces.
IMPORTANT: You must use the same encryption key throughout your network.

Network settings

From the Windows Control Panel (Start > Settings > Control Panel), double-click the Network icon or select your Network properties. If your operating system has a Networking Setup Wizard, please use that Wizard to configure your network.

You need to set the same Workgroup name for all computers and devices in the network, and a different computer name for each computer. You also need to share some of your resources (folders on your computer or a printer connected to it) to be able to see your computer on the network. Sharing folders can be done by right-clicking on that resource in Windows Explorer, and selecting the Sharing menu item.

If you have manually set your IP-addresses, you also need to make sure that every computer and device in the network has a different IP-address, but has the same subnet mask.

Internet Connection Sharing (ICS)

Internet access can be provided either directly through a wireless base station (preferred), or indirectly through a PC with Internet access and router/gateway software (e.g. ICS from the Windows OS) installed and running.

Preferred Solution >

If you connect your PC with the Wireless Adapter to an existing network host with Internet access:
If you have an existing home network with centrally shared broadband Internet access for all connected computers, you can connect your PC directly to your central network device: the router/gateway (or "host" computer). That way, it can access the Internet just like your other computers and you do not need to install ICS to make Internet access available to your network.

If you connect your PC with the Wireless Adapter to a stand-alone or client PC with Internet access:
If you connect the Wireless Adapter to a stand-alone or client PC with an existing broadband Internet connection, you can bridge - within that PC - the wireless network to the existing network adapter that connects to the Internet. You do this by enabling Internet Connection Sharing (ICS) from your Microsoft®Windows® operating system for that PC. This makes the PC share its existing broadband Internet connection with the wireless network.

ICS configuration and usage issues
ICS is intended for use in small networks in which the network configuration and the Internet connection are managed by the Windows-based computer on which the shared connection resides (the so-called "host" computer). It is assumed that on its network, this computer is the only Internet connection, it is the only gateway to the Internet, and that it sets up all internal network addresses (this means it is the DHCP server (see left) for the network).

If a network has a central host computer or router that acts as a **DHCP** server, this server allocates IP-addresses, netmasks, and the gateway address to all DHCP client computers and devices in the network dynamically.

IMPORTANT NOTES:

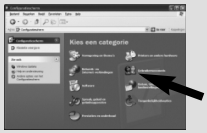
- Only Microsoft Windows98 SE (Second Edition) or higher provides ICS, other operating systems are not supported. You may try and use other router/gateway software at your own discretion.
- You should only install Internet Connection Sharing on the computer that you use to connect to the Internet.
- The host computer needs to remain switched on during Internet access sharing.
- ICS is a router/gateway software with Dynamic Host Control Protocol server (DHCP) functionality. The ICS host computer must be the only DHCP server on the network. Before installing ICS, first disable any DHCP services that are provided on the network (e.g. by a hardware router/gateway or base station). Please, refer to the router/gateway manufacturer's instructions on how to disable its DHCP services.

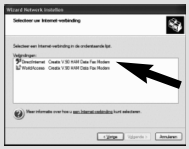
Enabling Internet Connection Sharing (ICS)

Though ICS works similarly for all operating systems, each version of Microsoft®Windows® activates Internet Connection Sharing in its own way. Please see below for the operating system you are using.

Enabling Internet Connection Sharing for Windows XP

You must have administrative rights to enable ICS in Windows XP.





1 Before you begin, check if you have a working Internet connection and if your home network is working properly (if you have one)

• Check the Internet connection by opening a web page with your browser.

2 Click Start, Settings, and Control Panel. Then double-click 'Internet Options' and double-click 'Home Networking Wizard'.

In the New Connection Wizard, choose 'Set up a home or small office network'.

> The Network Setup Wizard will appear.

3 Follow the instructions on the screen, and enter:

- a computer name (unique for each computer, e.g. STUDY or MOM)
- a workgroup name (the same for all computers in the network, e.g. HOMENET)

NOTE: these names are not the SSID or network name.

- Select to share your files and printers
- Make a Home Networking Setup disk if you have PCs with other Windows versions.

> This concludes the Wizard.

4 Run the 'Home Networking Wizard' or the Setup disk you created earlier, on all computers that you wish to use the shared Internet connection from.

> This adjusts the Internet settings to use the shared Internet connection.

Enabling Internet Connection Sharing for Windows 98SE

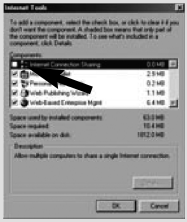
While installing you may be asked for the Windows Installation CD. Please, keep it at hand.

1 Before you begin, check if you have a working Internet connection and if your home network is working properly (if you have one)

• Check the Internet connection by opening a web page with your browser.

2 Click Start, Settings, and Control Panel. Then double-click Add/Remove Programs and click the Windows Setup tab.

> The window to the left will appear.

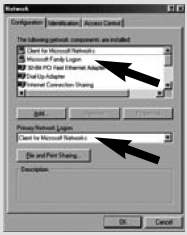


3 Double-click on Internet Tools

> The next window will appear.

4 In this window, put a mark in the check box for Internet Connection Sharing and click OK. Then click OK again.

> The Wizard Internet Connection Sharing will appear.



5 Follow the instructions on the screen, in each screen click Next to continue the Wizard until it is finished. In the Wizard you need to:

- Select your type of connection to the Internet.
- Choose the network adapter that provides you with Internet access to the PC.
- Choose the wireless network adapter.
- Choose to make a Client Configuration disk.

> This concludes the Wizard.

6 Next, check your Network properties as follows:

a. Click Start, Settings, Control Panel, and then double-click Network.
b. On the Configuration tab, browse the 'The following network components are installed' box. It should now include 'Internet Connection Sharing adapter' and 'TCP/IP->Internet Connection Sharing adapter'.
c. Double-click 'TCP/IP->Internet Connection Sharing adapter'.
d. In the IP Address tab, select 'Obtain an IP Address automatically'.
e. In the WINS Configuration tab, select 'Use DHCP for WINS resolution'.
f. In the Gateway tab, remove all gateways if any are listed.
g. In the DNS Configuration tab, select 'Disable DNS'.
h. In the Bindings tab, for security reasons you must de-select all bindings. (Please, do the same for 'TCP/IP (Shared)->External access network adapter'.)
i. Click OK to accept the new TCP/IP settings.
j. Select 'Windows Logon' as the Primary Network Logon.

Any changes to the network configuration will require a restart of the computer.

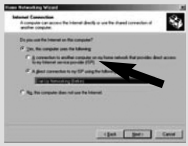
7 Run the Client Configuration disk you created earlier, on all computers that you wish to use the shared Internet connection from.

> This adjusts the Internet settings to use the shared Internet connection.

Enabling Internet Connection Sharing for Windows Me

1 Before you begin, check if you have a working Internet connection and if your home network is working properly (if you have one)

• Check the Internet connection by opening a web page with your browser.

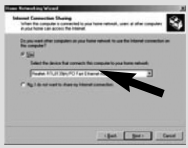


2 On the desktop, double-click 'My Network Places' and then double-click 'Home Networking Wizard'.

> The Home Networking Wizard will appear.

3 In each screen, click Next to continue the Wizard until it is finished.

In the Wizard you need to select 'Yes' (you are using Internet on this computer) and select 'A direct connection to my ISP using the following device:' and choose the network adapter you use to make contact with the Internet from the list.



4 In the next screen, select 'Yes' when asked 'if you want other computers on your home network to use the Internet connection on this computer'.

Choose the wireless network adapter.

5 Follow the instructions on the screen, and enter:

- a computer name (unique for each computer, e.g. STUDY or MOM)
- a workgroup name (the same for all computers in the network, e.g. HOMENET)

NOTE: these names are not the SSID or network name.

- Choose to share your files and printers
- Make a Home Networking Setup disk.

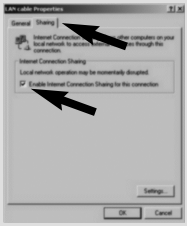
> This concludes the Wizard

6 Run the Setup disk you created earlier, on all computers that you wish to use the shared Internet connection from.

> This adjusts the Internet settings to use the shared Internet connection.

Enabling Internet Connection Sharing for Windows 2000

You must have administrative rights to enable ICS in Windows 2000.



1 Before you begin, check if you have a working Internet connection and if your home network is working properly (if you have one)

• Check the Internet connection by opening a web page with your browser.

2 Click Start, Settings, and Control Panel. Then double-click 'Network and Dial-Up Connections' and then double-click 'Home Networking Wizard'.

3 Right-click the connection you want to share. Then, click Properties.

> The Properties window for this network connection will appear.

4 Click the Sharing tab, and then select 'Enable Internet Connection Sharing for this connection'.

> This enables the ICS feature.

5 Run the 'Home Networking Wizard' on all computers that you wish to use the shared Internet connection from.

> This adjusts the Internet settings to use the shared Internet connection.

Advanced network security related issues

What are wireless network connections?

Your wireless network adapter uses a wireless protocol (called IEEE 802.11b or WiFi) to communicate with other network computers by means of radio transmissions. WiFi radio waves travel outwards from the antenna in all directions, and can transmit through walls and floors. Wireless transmissions can theoretically reach up to 450 meters in an open environment and reach speeds of up to 11 megabits per second (Mbps) at close range. However, the actual network range and data throughput rate will be less, depending on the wireless link quality.

Factors determining your network range and network speed

- The environment: Radio signals can travel farther outside of buildings, and if the wireless components are in direct line of sight to one another. Putting wireless components in high places helps avoid physical obstacles and provides better coverage.
- Building construction such as metal framing and concrete or masonry walls and floors will reduce radio signal strength. Avoid putting wireless components next to walls and other large, solid objects; or next to large metal objects such as computers, monitors, and appliances.
- Wireless signal range, speed, and strength can be affected by interference from neighbouring wireless networks and devices. Electro-magnetic devices such as televisions, radios, microwave ovens, and cordless phones, especially those with frequencies in the 2.4 GHz range, may also interfere with wireless transmission.
- Standing or sitting too close to wireless equipment can also affect radio signal quality.
- Adjusting the antenna: Do not place antennas next to large pieces of metal, because this might cause interference.

Securing your wireless network

As wireless computer networks use radio signals, it is possible for other wireless network devices outside your immediate area to pick up the wireless signals and either connect to your network or to capture the network traffic. Therefore, you should always enable the Wired Equivalent Privacy (**WEP**) or WiFi Protected Access (**WPA**) network encryption key to help prevent unauthorised connections or the possibility of eavesdroppers listening in on your network traffic.

Securing your network from Internet access
Check in the documentation of your wireless base station or router whether it provides you with a built-in firewall and network address translation (NAT), which provide security for an "always-on" broadband Internet connection that is shared among the computers and devices on your home network.

Computers on an Ad Hoc network may share an Internet connection that is set up on one of the computers (ICS). However, a **firewall** is usually not built-in and you should install one on the computer that is sharing the Internet connection.

What is a firewall?
A firewall acts as a barrier that helps protect your network from outside intruders. The firewall specifies what information can be communicated from the computers on your network to the Internet, and from the Internet to the computers on your network.

The DOs and DON'Ts of securing your wireless network

DO

Enable the highest encryption key level that your hardware provides for. Upgrade your hardware, if possible. If you do not protect your wireless network, all data from your PC might be accessible by, for example, your neighbours or passers-by.

Use a wireless base station or router with Network Address Translation (NAT) and firewall enabled for sharing your Internet connection.

Change the default passwords for your network devices. Leaving these at default makes it easy for an outsider to gain access.

Position wireless access points away from windows and toward the centre of your home. This decreases the strength of the signal outside your home.

Some wireless access points allow you to control access based on the unique Media Access Control (MAC) address of the network adapter trying to associate with it. If a MAC address has not been registered in wireless access point, it will not associate with it. If your access point has this feature, enable it and add the MAC addresses of the network adapters.

Just use common sense: Install an anti-virus program on each computer on your network and use it regularly to check your computers for viruses. Remember to update the anti-virus program on a regular basis.

DON'T

Do not rely on radio transmission range limitations to secure your network. Enable wireless security (WEP/WPA) to protect your network from unwanted access.

Use encryption keys and passwords that are hard to guess. Do not change passwords to reflect your name, address, or anything that would be easy to guess.

Never open attachments to email messages that you are not expecting. In addition, scan all diskettes and home-made CDs for viruses before opening files from them, or before starting your computer from them.

Do not load a program from an unknown source onto one of your network computers.

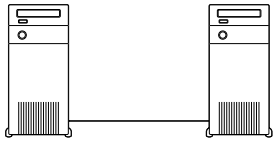
Do not ignore the common signs of viruses: unusual messages that appear on your screen, decreased system performance, missing data, and inability to access your hard drive. If you notice any of these problems on your computer, run your anti-virus program immediately to minimise the chances of losing data.

Do not connect your home network to broadband Internet without taking security measures: If you do not have a wireless base station installed on your network and you are sharing Internet access through one of the computers, you may want to consider installing firewall software.

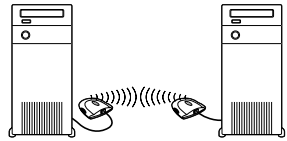
Network terminology

A network provides a means of communication between two or more computers (and other devices) that are connected to each other through wired or wireless means.

WIRED

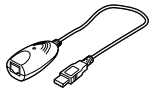


WIRELESS

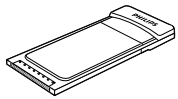


At each computer, you will need a network adapter or Network Interface Card (NIC) to be able to connect the computer to the network cable. Examples are:

USB/Ethernet cable



Ethernet notebook adapter

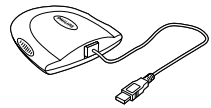


Already built-in

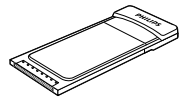
ETHERNET

At each computer, you will need to install a WiFi wireless adapter to be able to connect to another wireless enabled device. Examples are:

Wireless USB adapter



Wireless notebook adapter

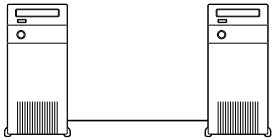


Already built-in

In a network, the computers need to be able to connect to each other physically. Therefore, another important network property is how the computers connect to each other, either directly or through a central device.

ONE-ON-ONE WIRED NETWORK

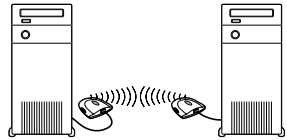
also known as: Direct connection (max. 2 PCs)



NOTE: Use a crossover Ethernet cable to connect two computers directly to each other.

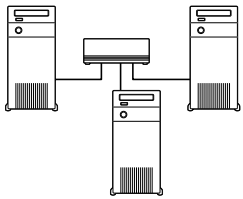
ONE-ON-ONE WIRELESS NETWORK

also known as: Ad Hoc / Peer-to-Peer



WIRED NETWORK WITH MORE THAN 2 PCs

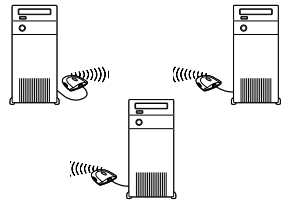
Use a hub or switch to connect more than 2 PCs to each other.



NOTE: Use straight-through Ethernet cables to connect the computers to the central device (hub/switch).

WIRELESS NETWORK WITH MORE THAN 2 PCs

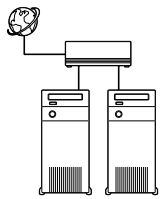
also known as: Ad Hoc / Peer-to-Peer



The wireless medium forms a hub in and of itself. No hardware hub is needed.

HOW TO INTERCONNECT WIRED NETWORKS

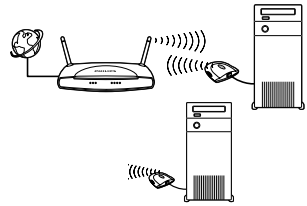
Use a **gateway router** to connect one network to another (e.g. to the Internet, also known as WAN).



CONNECTING WIRELESS TO WIRED NETWORKS

also known as: Infrastructure / Access Point

Use a **wireless base station**.



Central devices, like a hub, switch, router or wireless access point may be stand-alone devices or built into a computer.

- A **hub** has multiple ports and serves as a central connection point for communication lines from all computers on a wired network. It copies all data arriving at one port to the other ports. A **switch** is similar to a hub, but is able to handle different network speeds at each port.
- **Gateway routers** and **wireless access points** route network traffic from one network to another (e.g. from a wired network to the Internet, or from a wireless network to a wired network or to the Internet).

IMPORTANT NOTE: Wired and Wireless components may be linked together to provide a variety of network layouts/topologies.

Technical specifications

Radio	IEEE 802.11b
Radio Technology	Direct Sequence Spread Spectrum (DSSS)
Antenna Type	Built-in antenna
Data Rate	1 / 2 / 5.5 / 11 Mbps
Host interface	USB specification version 1.1
Power consumption send / receive	Approx. 400 mA / 320 mA
Dimensions (h x w x d)	22 x 79 x 93 mm
Weight	Approx. [xxx] g (adapter only)
Operating Temperature	0 ~ 55°C
Storage Temperature	-20 ~ 75°C
Humidity	5 ~ 90% non-condensing

Troubleshooting

Please, check the following troubleshooting items and our web site www.philips.com before contacting our technical support.

Problem	Possible cause	Solution
ADAPTER INSTALLATION PROBLEMS		
Your PC cannot find the Wireless USB Adapter or the network driver does not install correctly.	USB Adapter not connected.	Make sure the USB cable is securely connected to the USB connectors of both the adapter and of your PC.
	USB Adapter damaged.	Check for any hardware problems, such as physical damage to the adapter's connector.
	USB Adapter or port defective.	Try to connect the adapter to another USB port. If this also fails, test your computer with another Wireless USB Adapter that is known to operate correctly.
	BIOS too old.	Make sure your computer is using the latest BIOS.
	Conflicting network adapters.	If there are other network adapters in the computer, they may be causing conflicts. Remove all other adapters from the computer and test the wireless adapter separately.

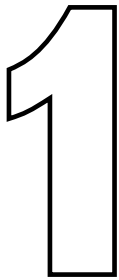
If it still does not work, try re-installing the wireless USB adapter from the original Installation CD. Restart your PC.

Problem	Possible cause	Solution
NETWORK CONNECTION PROBLEMS		
If the Link LED on the Wireless USB Adapter does not light, or if you cannot access any network resources from the computer.	PC or other network devices switched off.	Make sure the computer and other network devices are receiving power.
No access to a Windows or NetWare service on the network.	Service unavailable.	Check that you have enabled and configured the service correctly. If you cannot connect to a particular server, be sure that you have access rights and a valid ID and password. If you cannot access the Internet, be sure you have configured your system for TCP/IP.
If your wireless adapter cannot communicate with a computer in the network when configured for Infrastructure mode.	Base Station / Access Point is switched off.	Make sure the access point that the station is associated with is powered on.
	Range too long (weak radio signal).	Reposition your Wireless Adapter.
	Wrong settings	Make sure the SSID and the network encryption key are the same as those used by the wireless access point.

Guarantuee certificate
Garantiebewijs
Certificado de garantia
Garantibevis

Certificat de garantie
Certificado de garantia
Εγγύηση
Garantibevis

Garantieschein
Certificato di garanzia
Garanticertifikat
Takuutodistus



year warranty	χρόνος εγγύηση
année garantie	år garanti
Jahr Garantie	år garanti
jaar garantie	år garanti
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Type: **CPWUA001**

Serial nr: _____

Date of purchase - Date de la vente - Verkaufsdatum - Aankoopdatum - Fecha de compra - Date d'acquisito -
Data da adquirição - Ημερομηνία αγοράς - Inköpsdatum - Anskaffelsesdato - Kjøpedato - Ostopäivä -

Dealer's name, address and signature	Ονοματεπώνυμο, διεύθυνση και υπογραφή του εμπ. προμηθευτη
Nom, adresse et signature du revendeur	Återförsäljarens namn, adress och signatur
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Nombre, direccion y firma del distribudor	Jälleenmyyjän nimi, osoite ja allekirjoitus
Nome, indirizzo e firma del fornitore	Nome, morada e assinature da loja

6 month guarantee on rechargeable batteries	Pilhas recarregáveis com 6 meses de garantia
6 mois de garantie sur les piles rechargeables	Εγγύηση 6 μηνών σε επαναφορτιζόμενες μπαταρίες
6 meses de garantía para las pilas recargables	6 månaders garanti på laddningsbara batterier
6 Monate Garantie auf wiederaufladbare Batterien	6 måneders garanti på genopladelige batterier
6 maanden garantie op oplaadbare batterijen	6 måneders garanti på de oppladbare batteriene
Garanzia di 6 mesi sulle batterie ricaricabili	Ladattavilla akuilla on 6 kuukauden takuu

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